

## AMENDMENT

### In the Claims:

The following listing of claims will replace all prior versions and listings of claims in the application.

1-17. (Canceled)

18. (Currently Amended) A pharmaceutical composition comprising a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1 as the active ingredient and at least one physiologically acceptable excipient, wherein the polypeptide is anti-apoptotic *in vitro* in hepatocytes.

19. (Canceled)

20. (Canceled)

21. (Previously Presented) The pharmaceutical composition of claim 18, wherein the polypeptide is further defined as comprising the amino acid sequence from amino acid residue 27 to amino acid residue 175 of SEQ ID NO:1.

22. (Previously Presented) The pharmaceutical composition of claim 18, wherein the polypeptide is further defined as a human hepatocarcinoma-intestine-pancreas/pancreatic-associated protein (HIP/PAP) with the amino acid sequence of SEQ ID NO:1.

23. (Previously Presented) The pharmaceutical composition of claim 18, wherein the polypeptide is comprised in an amount effective to stimulate liver regeneration *in vivo*.

24. (Previously Presented) The pharmaceutical composition of claim 23, wherein the polypeptide is comprised in an amount effective to stimulate liver regeneration after chronic or acute liver failure.

25. (Previously Presented) The pharmaceutical composition of claim 18, further defined as comprising a therapeutically effective amount of a hepatotoxic compound.

26. (Canceled)
27. (Withdrawn) A method of treating a subject comprising:  
obtaining a pharmaceutical composition of claim 18; and  
administering the pharmaceutical composition to a subject.
28. (Withdrawn) The method of claim 27, wherein the subject is a human.
29. (Withdrawn) The method of claim 27, further defined as a method of stimulating liver regeneration in the subject.
30. (Withdrawn) The method of claim 27, wherein the subject has chronic or acute liver failure.
31. (Withdrawn) The method of claim 27, wherein the subject is at risk of or has liver necrosis.
32. (Withdrawn) The method of claim 27, wherein the subject has had a liver resection.
33. (Withdrawn) The method of claim 27, wherein the subject has a partial liver transplant, a hepatic failure, hepatic cirrhosis, or hepatic cancer.
34. (Withdrawn) The method of claim 33, wherein the subject has hepatic failure caused by liver disease.
35. (Withdrawn) The method of claim 33, wherein the subject has hepatic cirrhosis of alcoholic, viral, or drug cause.
36. (Withdrawn) The method of claim 27, wherein the subject has Hepatitis B, Hepatitis C, Urea Cycle defects, Familial hypercholesterolemia, Alcohol induced cirrhosis, Glycogen Storage Disease, Autoimmune Hepatitis, Primary Hyperoxaluria type 1, Cryptogenic cirrhosis, Crigler-Najjar syndrome type 1, Congenital Hepatic Fibrosis, Neimann-Pick Disease, Primary Biliary Cirrhosis, Familial Amyloidosis, Biliary Atresia, Hepatocellular Carcinoma, Primary Sclerosing Cholangitis, Hepatoblastoma, Alagille Syndrome, Hemangioendothelioma, Familial Cholestasis, Non-Carcinoid neuro- endocrine, Drug induced liver failure, benign liver tumor, liver tumor, Acute and or fulminant liver failure, Budd-Chiari syndrome, Alpha-1-antitrypsin deficiency,

Wilson Disease, Hemochromatosis, Tyrosinemia, Protoporphyrin, and/or Cystic fibrosis, non-alcoholic fatty liver disease (NAFLD), and/or non-alcoholic steatohepatitis (NASH).

37. (Currently Amended) A composition comprising a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1 and a cell, wherein the polypeptide is anti-apoptotic *in vitro* in hepatocytes.

38. (Previously Presented) The composition of claim 37, wherein the cell is a hepatocyte.

39. (Previously Presented) The composition of claim 38, wherein the hepatocyte is a dividing hepatocyte.

40. (Withdrawn) The composition of claim 37, wherein the cell is a bone-marrow stem cell.

41. (Canceled)

42. (Canceled)

43. (Currently Amended) A pharmaceutical composition comprising:  
a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1 and a cell, wherein the polypeptide is anti-apoptotic *in vitro* in hepatocytes; or  
a cell comprising an expression cassette that drives expression of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1, wherein the polypeptide is anti-apoptotic *in vitro* in hepatocytes.

44. (Withdrawn, Currently Amended) A process for stimulating cell growth *in vitro* comprising:

- (a) collecting cells;
- (b) cultivating said cells in an appropriate culture medium; and
- (c) treating said cells with a mitogenic amount of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid

sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1; or transfecting the cell with an expression cassette that drives expression of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1.

45. (Withdrawn, Currently Amended) The process of claim 44, further defined as a process for stimulating hepatocyte growth *in vitro* comprising:

- (a) collecting hepatocytes;
- (b) cultivating said hepatocytes in an appropriate culture medium; and
- (c) treating said hepatocytes with a mitogenic amount of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1.

46. (Withdrawn, Currently Amended) The process of claim 44, further defined as a process for stimulating hepatocyte growth *in vitro* comprising:

- (a) collecting hepatocytes;
- (b) cultivating said hepatocytes in an appropriate culture medium; and
- (c) transfecting said hepatocytes with an expression cassette that drives expression of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1.

47. (Withdrawn, Currently Amended) The process of claim 44, further defined as a process for treating bone marrow-stem cells *in vitro* comprising:

- (a) collecting bone marrow stem cells;
- (b) cultivating said bone marrow stem cells in an appropriate culture medium; and
- (c) treating said bone marrow stem cells with a mitogenic amount of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1.

48. (Withdrawn) The process of claim 44, further defined as a process of manufacturing a pharmaceutical composition.

49. (Withdrawn, Currently Amended) A process of inhibiting hepatocyte apoptosis *in vitro* comprising:

- (a) collecting hepatocytes;
- (b) cultivating said hepatocytes in an appropriate culture medium; and
- (c) treating said hepatocytes with an effective amount of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1; or transfecting the cell with an expression cassette that drives expression of a polypeptide comprising an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue [[36]] 27 to amino acid residue 175 of SEQ ID NO:1.

50. (New) The pharmaceutical composition of claim 18, wherein the polypeptide is further defined as consisting essentially of the amino acid sequence from amino acid residue 27 to amino acid residue 175 of SEQ ID NO:1.

51. (New) The pharmaceutical composition of claim 18, wherein the polypeptide is further defined as consisting of the amino acid sequence from amino acid residue 27 to amino acid residue 175 of SEQ ID NO:1.

52. (New) The pharmaceutical composition of claim 18, wherein the composition is further defined as consisting essentially of an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue 27 to amino acid residue 175 of SEQ ID NO:1.

53. (New) The pharmaceutical composition of claim 18, wherein the composition is further defined as consisting of an amino acid sequence having at least 90% amino acid identity with the amino acid sequence from amino acid residue 27 to amino acid residue 175 of SEQ ID NO:1.